

Subject:-

Diversion of 22.176 ha. protected forest land for the project of
Four lanning of Vadodara-Padra-Jambusar Road
Km. 16/280 to 44/00
Dist. Vadodara, State Gujarat.

Cost-benefit analysis

(As per MoEF &CC Guideline for conducting Cost Benefit Analysis vide its Handbook 28th march, 2019 & letter-3/2011-FC (Vol-1), Dated: 06.01.2022)

Table-A: Cases under which a cost-benefit analysis for forest diversion are required

S. No.	Nature of proposal	Applicable/ not applicable	Remarks
1	All categories of proposals involving forest land upto 22.176 hectares in plains.	Not applicable	-
2	Proposal for defense installation purposes and oil prospecting (prospecting only).	Not applicable	-
3	Habitation, establishment of industrial units, tourist lodges complex and other building construction.	Not applicable	-
4	All other proposals involving forest land more than 22.176 hectares in plains including roads, transmission lines, minor, medium and major irrigation projects, hydro projects, mining activity, railway lines, location specific installations like micro-wave stations, auto repeater centers, TV towers etc.	Applicable	The proposed project covers an area of 22.176 hectares. Forest land Therefore, the CBA applies.

Table B: Estimation of cost of Forest Diversion


S.No.	Parameters	Remarks
1	Ecosystem services losses due to proposed forest diversion.	The proposed forest area to be diverted is mostly characterized by dry deciduous forest. Considering Open forest of Eco-Class III, an average value of NPV of INR 12,28,000/- say INR 12.28 Lakhs per ha. has been considered as per MoEF LCC letter 5-3/2011-FC (Vol-1) dated 06.01.2022. Therefore, ecosystem services losses due to proposed diversion of 22.176 ha. of forest land = Rs. 272 lakh (22.176 Ha x 12.28 lakh) considered as total NPV.
2	Loss of animal husbandry productivity, including loss of fodder.	There is no loss in animal husbandry, productivity including loss of fodder due to the diversion of forest land.
3	Cost of human resettlement.	There is no displacement of people in the forest area proposed for diversion
4	Loss of public facilities and administrative infrastructure (Roads, building, schools, dispensaries, electric lines, railways, etc.) on forest land, which would require forest land if these facilities were diverted due to the project.	There are no loss in public facilities and administrative infrastructures (road, buildings, schools, dispensaries, electric lines, railways etc.) on proposed diverted forest land.
5	Possession value of forest land diverted	30% of environmental costs (NPV) $272 \times 0.3 = 81.6$ lakh
6	Cost of Suffering to oustees	Nil. There are no outstees involved in the forest area
7	Habitat Fragmentation Cost	50% of total NPV $272 \times 0.50 = 136.0$ lakhs
8	Compensatory afforestation and soil & moisture conservation cost	Total CA Area Consider is 44.00 ha (Double Degraded Forest area) 5.07 lakh/ ha for a Similar This Project Total Value of CA calculated at 223.0 lakh (44 ha x 5.07 lakh)
Therefore, Cost of forest Diversion:- 272.0 lakhs + 81.6 lakhs + 136.0 lakhs + 223.0 lakhs = 712.6 lakhs		


Table-C-Existing guidelines for estimating benefits of forest-diversion in CBA

S. No.	Parameters	Remarks
1	Increase in productively Attribute to the specific project.	Directly generate maximum employment opportunities in these areas, which boost up the economy of the region and the state. Due to the proposed project there will be overall development of the project area in terms of fast connectivity, transportation of agriculture produces, easy access to education, health, etc.
2	Benefits to economy	Economic benefit in terms of increase in trade, saving in vehicular operation and maintenance cost, faster and better connectivity, safer journey to commuter and saving of travel time. Improved road connectivity helps in better implementation and management of government schemes. Proposed improved connectivity will accelerate the growth in these areas. It will provide last and economical transport of goods. After completion, the local people and industries situated in the area will be greatly benefited. The proposed project road will provide safe, fast, economic and environmental friendly transportation to the state which in term will accelerate the rate of growth in this area. In addition to that there are several other benefits that may accrue due to proposed development are saving in fuel, reduction in time to commute, vehicle maintenance, reduction in carbon emission etc. "However, they have not been quantified as it will be a function of various govt. policy variables." Exact quantification of the value is not possible as it is time and policy dependent.
3	No. of population benefited.	Approx up to 40 lakhs
4.	Economic Benefit due to direct and indirect Employment due to the project	Approximately-3000 man days employment
5	Economic Benefit due to Compensatory	Benefits from such Compensatory Afforestation accruing over next 50 years.

DATE: 23/02/2023

PLACE: Vadodara


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